On successful completion of this course, all students will have developed their skills in:
- correctly using symbols and units;
- analytically/critically applying the theoretical concepts and methods of mechanics covered in the course, and formulating appropriate equations to solve problems;
- using efficiently and effectively the textbook and other printed/electronic literature relevant to the course;
- performing scripted experiments as a team, analyzing and evaluating the data, and writing lab reports;
- using good scientific English for written and oral communication.

On successful completion of this course, all students will have developed their appreciation of, and respect for values and attitudes to:
- the discipline of physics as a fundamental branch of science that provides qualitative and quantitative explanations about the physical world;
- being an open-minded, curious, creative and reasoned skeptic;
- being aware of ethical issues in science.

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CATALOGUE DESCRIPTION


AIMS & OBJECTIVES

- To introduce the fundamental concepts of motion necessary for engineering science and provide essential background for engineering students.
- To provide students with a deeper understanding of fundamental laws and concepts of natural phenomena.
- To improve students’ problem-solving skills.
- To strengthen students’ creative and systematic thinking capability.

GENERAL LEARNING OUTCOMES (COMPETENCIES)

On successful completion of this course, all students will have developed knowledge and understanding of:
- the concepts, theories, techniques and generalizing principles of classical mechanics;
- the mathematical forms of the laws and physical relationships in classical mechanics and their application in solving problems;
- diagrammatic and graphical representation of physics problems and physical data;
- validation of theory through experiment/observation.

On successful completion of this course, all students will have developed their skills in:
- correctly using symbols and units;
- analytically/critically applying the theoretical concepts and methods of mechanics covered in the course, and formulating appropriate equations to solve problems;
- using efficiently and effectively the textbook and other printed/electronic literature relevant to the course;
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- the discipline of physics as a fundamental branch of science that provides qualitative and quantitative explanations about the physical world;
- being an open-minded, curious, creative and reasoned skeptic;
- being aware of ethical issues in science.

GRADING CRITERIA

- **A** (excellent) ~85% and above
  - Excellent understanding of the concepts and the principles as demonstrated by correct and accurate knowledge and application of theory/laws in solving problems. Response to problems is clear, legible, concise and accurate. Excellent performance.

- **B** (good) ~70% and above
  - Better than average understanding of the concepts and the principles as demonstrated by correct and accurate knowledge and application of theory/laws in solving problems but does not have the depth and outstanding quality of an "A". Response to problems is fairly clear, legible, but occasionally contains some inaccuracies. Performance exceeds the minimum requirements.

- **C** (average) ~60% and above
  - An average understanding of the concepts and the principles as demonstrated by reasonably correct knowledge and application of theory/laws in solving problems but does not have any depth. Response to problems is reasonably clear, legible, but contains inaccuracies. It reveals a sufficient understanding of the material but lacks depth in understanding and approach/application. Content and form do not go beyond basic expectations and/or display some substantial errors. Acceptable but non-exceptional performance that does not go beyond the minimum requirements.
Minimal knowledge and barely sufficient understanding of the concepts and the principles as demonstrated by approximately correct application of theory/laws in solving problems. Response to problems is not very clear and is barely legible and contains many inaccuracies. It reveals a minimum (confused) understanding of the material and lacks depth in understanding and approach/application. Content and form do not adequately meet the basic expectations, and/or display significant errors. Performance demonstrates severe problems in one or more areas.

Work does not meet the most minimal standards. It reveals no understanding of the material, lack of basic academic skills and knowledge, or completely incomprehensible writing. Performance is not acceptable.

Not enough information to assign a letter grade.

Overall Attendance to the classes < 50% will lead automatically to the grade NG. All repeating students who fulfilled the attendance requirement of a course once, i.e., whose previous grade is not NG / W are exempted from the attendance requirement.

Laboratory Participation < 3 will lead automatically to the grade NG.

Missing any 2 two exams will lead automatically to the grade NG.

### METHOD OF ASSESSMENT

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>30%</td>
<td>Will be held in the Midterm Exam week 06-17 April. Topics: Chapter 1-6</td>
</tr>
<tr>
<td>In-term Exam</td>
<td>15%</td>
<td>Will be held together with the Lab exam in 2nd Midterm week to be announced. Topics: Chapter 7-9</td>
</tr>
<tr>
<td>Lab Exam</td>
<td>10%</td>
<td>Will be held together with the Intern exam in the 2nd Midterm week to be announced. Topics: Theoretical background of Experiments conducted, Analysis of Experimental Data, Experimental Setup</td>
</tr>
<tr>
<td>Lab Participation</td>
<td>5%</td>
<td>(See Laboratory Schedule below)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
<td>Will be held in the Final Exam weeks May 27 – June 13, 2020. Topics: All Chapters</td>
</tr>
<tr>
<td><strong>Total Bonus</strong></td>
<td>4%</td>
<td>Attendance (Students with an attendance in the ranges 60%-70% are awarded 1 point, 70%-80% are awarded 2 points, and &gt;80% are awarded 3 points)</td>
</tr>
<tr>
<td><strong>Total Bonus</strong></td>
<td>9%</td>
<td>Web Quizzes via WebAssign (Total of 4 Web Quizzes. No makeup for web quizzes. Best 3 will be counted.) The Web Quiz results will be added to the grade only if the student has passed the course based on the written examinations. After adding the web quiz results at most one Letter Grade can be shifted up.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>103+</td>
<td>points</td>
</tr>
</tbody>
</table>

### IMPORTANT NOTES

**Attendance:**
Active participation in lectures is a must for the successful completion of this course. If a nonrepeating student’s total attendance (classes, tutorials, laboratories, and exams) is below 50%, automatically the grade NG will be assigned. The same rule is also valid for repeating students having received a grade NG or W in the previous semester. Repeating students having received a grade D- or F are exempted from the attendance requirement.

**Make-up Exam:**
According to the Examinations and Evaluations Regulation of Eastern Mediterranean University by Law students who have not attended any of the Midterm, In-term, or Final exams have to provide a valid excuse for not attending the exam within 3 working days after the exam in order to be granted the right to enter the make-up examination. For any student missing more than one of the main exams (Midterm, In-term, and Final or the corresponding make-up exam), the grade NG will be assigned.

**Objections:**
Graded exam papers will be available for inspection upon request. According to the regulations of the University, any objections or re-grade requests should be made within a week following the announcement of grades.

**TEXTBOOK (REQUIRED)**
LAB DATES

LAB POLICIES

• There will be five lab sessions throughout the semester. These will be scheduled during the time slots of the tutorial sessions. Please refer to the schedule (LAB DATES) which is going to be also announced via Physics Department’s web page for the specific date of each lab session. Note that students who do not attend at least three lab sessions will automatically get NG.

• Repeating students having attended PHYS101 in Fall 2019/20 can be exempted from the Laboratory Participation. In this case all Laboratory participation scores from the fall semester 2019/20 will be transferred to the experiment scores of the spring semester 2019/20. The repeating students can check their previous lab scores via EMU student portal. A repeating student being satisfied with her/his former Lab score is efficaciously exempted from the Laboratory Participation. If a repeating student wants to improve her/his Lab score she/he will have to attend all lab sessions of PHYS101 in Spring 2019/20.

• All students must attend the Lab-exam!

LAB DATES

<table>
<thead>
<tr>
<th>GROUP</th>
<th>DAY/PERIOD</th>
<th>EXPERIMENT 1</th>
<th>EXPERIMENT 2</th>
<th>EXPERIMENT 3</th>
<th>EXPERIMENT 4</th>
<th>EXPERIMENT 5</th>
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<tbody>
<tr>
<td>01</td>
<td>MON 12:30-14:20</td>
<td>24 FEBRUARY</td>
<td>09 MARCH</td>
<td>23 MARCH</td>
<td>20 APRIL</td>
<td>04 MAY</td>
</tr>
<tr>
<td>02</td>
<td>TUE 14:30-16:20</td>
<td>25 FEBRUARY</td>
<td>10 MARCH</td>
<td>24 MARCH</td>
<td>21 APRIL</td>
<td>05 MAY</td>
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<tr>
<td>03</td>
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<td>26 MARCH</td>
<td>30 APRIL</td>
<td>14 MAY</td>
</tr>
<tr>
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<td>11 MAY</td>
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Check the announcements via department’s web site: physics.emu.edu.tr

ACADEMIC DISHONESTY

Cheating is copying from others or providing information, written or oral, to others. According to university by-laws, cheating is a serious academic dishonesty case punishable with disciplinary action including a letter of official warning and/or suspension from The University for up to one semester. Disciplinary action is recorded in student’s file and may appear in transcripts.

PLEASE KEEP THIS COURSE SYLLABUS FOR REFERENCE AS IT CONTAINS IMPORTANT INFORMATION!